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II. Claim Amendments

Claims 1-27 (cancelled)

28. (Presently Amended) A process for rapid solution synthesis of a peptide in an organic solvent or a mixture of organic solvents, the process comprising repetitive cycles of steps (a)-(d):

(a) a coupling step, using an excess of a molecule comprising an activated carboxylic component to acylate an amino component,

(b) a quenching step in which a scavenger is used to remove residual activated carboxylic functions, wherein the scavenger may also be used for deprotection of the growing peptide,

(c) one or more aqueous extractions and

optionally, (d) a separate deprotection step, followed by one or more aqueous extractions, wherein

the process comprises at least one step (b), referred to as step (b'), in which an amine comprising a free anion or a latent anion is used as a scavenger of residual activated carboxylic functions.

29. (Presently Amended) The process of claim 28, wherein in step (a) the molecule comprising an activated carboxylic function is formed by reacting a carboxylic component, a coupling additive and a coupling reagent and wherein the molar amounts of the reagents used are in decreasing order:

carboxylic component, coupling additive > coupling reagent > amino component.

30. (New) The process of claim 28, wherein in step (a) a pre-activated carboxylic component

is used.

31. (New) The process of claim 28, wherein in step (b') an amine comprising a latent anion is used as the scavenger.

32. (New) The process of claim 31, wherein the latent anion in the scavenging amine bears a temporary protecting group which can be selectively removed in the presence of any permanent protecting groups attached to the growing peptide.

33. (New) The process of claim 31, wherein the latent anion in the scavenging amine bears a temporary protecting group which displays a lability similar to that of the temporary protecting group present at the N-terminus of the growing peptide.

34. (New) The process of claim 32, wherein the temporary protecting groups are hydrogenolytically removable groups.

35. (New) The process of claim 34, wherein the temporary protecting groups are of the benzyl type.

36. (New) The process of claim 31, wherein the scavenger is a primary amine comprising a free anion or a latent anion.

37. (New) The process of claim 36, wherein the primary amine is a C-terminally protected amino acid derivative.

38. (New) The process of claim 37, wherein the amino acid is β-alanine or a derivative thereof.

39. (New) The process of claim 38, wherein the scavenger is benzyl β-alaninate or a salt

thereof.

40. (New) The process of claim 28, wherein the process comprises one or more cycles wherein in step (b) a polyamine is used as the scavenger.

41. (New) The process of claim 28, comprising one or more cycles wherein in step (b) deprotection does not occur and the subsequent step (c) comprises sequential basic, acidic and basic extractions.

42. (New) The process of claim 41, wherein the extractions are performed in the presence of sodium chloride or potassium nitrate.

43. (New) The process of claim 41, comprising a subsequent step (d) which comprises deprotection and sequential basic and neutral extractions.

44. (New) The process of claim 42, wherein the extractions are performed in the presence of sodium chloride or potassium nitrate.

45. (New) The process of claim 28, wherein in the last cycle in step (a) the protecting groups of the carboxylic component display a similar lability to that of the permanent protecting groups of the growing peptide and in step (b) the scavenger is a polyamine.

46. (New) The process of claim 28, wherein the organic solvent or mixture of organic solvents is ethyl acetate or a mixture of ethyl acetate and dichloromethane, a mixture of ethyl acetate and 1-methyl-2-pyrrolidinone, a mixture of ethyl acetate and *N,N*-dimethylformamide or a mixture of ethyl acetate and tetrahydrofuran.

47. (New) The process of claim 28, wherein the process is performed within a temperature range of 0 to 50 °C.

48. (New) The process of claim 47, wherein the process is performed at ambient temperature.

49. (New) A method for combinatorial synthesis of peptide libraries using the split and mix method, wherein the process of claim 28 is applied.

50. (New) A method for automated solution synthesis of peptides, wherein the process of claim 28 is applied.

51. (New) The process of claim 32 wherein the permanent protecting groups are acidolytically removable groups.